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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/736,168	12/15/2000	Naoto Matsumoto	00407.00007	8093

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EXAMINER

RAMPURIA, SATISH

ART UNIT	PAPER NUMBER
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2124

DATE MAILED: 11/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/736,168

Applicant(s)

MATSUMOTO, NAOTO

Examiner

Satish Rampuria

Art Unit

2124

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 December 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. Claims 1-14 are pending.

***Specification***

2. The disclosure is objected to because of the following informalities:

On page 6, line 4 "performe" should be "perform". On page 15 line 8 "a new product are" should be "a new product is".

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1, 4, 5, 9, 10 and 11 are rejected under 35 U.S.C. 102(a) as being clearly anticipated by Ichinose, Japanese Patent No. JP411265282A.

***As per claim 1, Ichinose discloses:***

***- A vending machine control program rewrite system for rewriting a control program of a vending machine*** (Detailed Description of the Invention, page 1 paragraph 1, lines 18-19 "rewrites a control program in more detail about the control unit of the vending machine")

**- said vending machine comprises a control device having a storage unit storing the control program as a current one of the control program** (Detailed Description of the Invention, page 1 paragraph 7, lines 38-39 "when rewriting of a control program goes wrong in the **control unit** of the vending machine using the **flash memory**") and (Detailed Description of the Invention, page 1 paragraph 8, lines 44-45 "The **flash memory** in which the **control program** which controls a **vending machine** was written, RAM which memorizes data etc.")

**- a host computer adapted to send a new one of the control program to said vending machine** (Detailed Description of the Invention, page 1 paragraph 7, line 40 "enables rewriting of a **control program** even from a **remote** (host computer) place"), the vending machine has received the control program (Detailed Description of the Invention, page 3 paragraph 15, lines 1-3 "A control program change dispatch demand command is received at the time of the call in of the vending machine"), and download the control program from the large computer of the remote site (Detailed Description of the Invention, page 3 paragraph 15, line 4 "by having a means to download a new control program from a pin center, large computer").

**- said control device comprising a rewritable memory as said storage unit** (Detailed Description of the Invention, page 1 paragraph 1, line 19 "**control unit** (control device) of the **vending machine** which carried the **flash memory**").

**- a receiver adapted to receive said new control program from said host computer** (Detailed Description of the Invention, page 3 paragraph 15, lines 1-2 "A **control program** change dispatch demand command is **received** at the time of the call in of the vending machine") and (Detailed Description of the Invention, page 3 paragraph 22, lines 31-32 "rewriting of the **control program** of a **vending machine** from a **remote place** and a control program is rewritten").

**- a rewriter adapted to rewrite said control program in said rewritable memory** (Detailed Description of the Invention, page 1 paragraph 8, lines 45-46 "and the program data **write-in equipment** (rewriter) for writing a new vending machine **control program** in the aforementioned **flash memory**").

**As per claims 4 and 10 Ichinose discloses:**

**- said host computer sends to said vending machine said new one of the control program** (Detailed Description of the Invention, page 3 paragraph 15, lines 1-2 "A **control program** change dispatch demand command is **received** at the time of the call in of the vending machine") and (Detailed Description of the Invention, page 1 paragraph 8, lines 45-46 "**writing a new** vending machine **control program**") **together with a new attribute information of said new one of the control program** (Detailed Description of the Invention, page 2 paragraph 9, lines 10-12, "Writing is performed about area with the software of empty area or the oldest version. The processing program of a power up is equipped with a version acquisition means to

acquire the program version of each storage area.") Matsumato discloses that attribute information can be a version number (page 4, lines 4-5, "The attribute information is information ... such as version").

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***- said rewriter has a rewrite determinator adapted to determine based on said new attribute information whether or not the control program should be rewritten*** (Detailed Description of the Invention, page 2 paragraph 9, lines 12-14, "It is characterized by **equipping** the control program of the area which has the **newest version number** among the version numbers obtained from the aforementioned version acquisition means with **a means to pass the right of execution** of a central arithmetic unit").

As per claims 5 and 11 Ichinose discloses:

***- said control device having a rewrite program previously stored therein, wherein said rewriter performs rewrite of the control program to said new one by executing said rewrite program,*** (Detailed Description of the Invention, page 1 paragraph 7, line 39, "it attains low-cost-ization of the **rewriting equipment** (rewrite program) of a control program") and (Detailed Description of the Invention, page 2 paragraph 10, lines 17-19, "in the **writer program** for **new control program** writing on Above RAM, passes and writes the right of **execution** of a central arithmetic unit in a writer program).

**As per claim 9, Ichinose discloses:**

**- A vending machine having a control device comprising a storage unit** (Detailed Description of the Invention, page 1 paragraph 8, lines 43-44, "The **control unit** of the **vending machine** of the claim 1 of this invention The **flash memory** in which the control program which controls a vending machine").

**- an arithmetic and logic unit for executing** (Detailed Description of the Invention, page 1 paragraph 8, lines 46-48 "In the control unit of the vending machine which consists of **central arithmetic units** which control the whole The aforementioned flash memory a program required for control of a vending machine") and (Detailed Description of the Invention, page 2 paragraph 9, line 14 "means to pass the right of **execution** of a **central arithmetic unit** (arithmetic logic unit)").

**- a host computer sending a new one of the control program** (Detailed Description of the Invention, page 1 paragraph 7, line 40 "by having a means to download a **new control program** from a pin center, large computer (host computer)") **to said vending machine, wherein said control device further comprises: a rewritable memory as said storage unit** (Detailed Description of the Invention, page 1 paragraph 8, lines 43-44, "The **control unit** of the **vending machine** of the claim 1 of this invention The **flash memory** in which the control program which controls a vending machine").

- **communication controller adapted to control communication with said host computer** (Detailed Description of the Invention, page 2 paragraph 13, lines 33-34 "The **communication device** (communication controller) to which the control unit of the vending machine of a claim 6 communicates with the pin center, large computer of a **remote** (host computer) place").

- **rewriter adapted to rewrite the control program received from the host computer via said communication controller** (Detailed Description of the Invention, page 1 paragraph 8, lines 45-46 "the program data **write-in equipment** (rewriter) for writing a new vending machine control program"), and (Detailed Description of the Invention, page 1 paragraph 7, line 40 "rewriting of a **control program** even from a **remote** (host computer) place") inherently including the communication controller to receive the control program from host computer.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.



5. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ichinose, Japanese Patent No. JP411265282A in view of Yoshikawa, US Patent No. 5,657,301.

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As per claim 2 Ichinose disclose that host computer sends new control program to vending machine. Ichinose does not disclose that control program sent "**simultaneously**" and to "**plurality**" of vending machine.

However, Yoshikawa, discloses **simultaneously rewrite the control program of the plurality of automatic changer systems by the external host computer** (col. 4, lines 24-27, "it is possible to **simultaneously** apply a program rewrite command to a **plurality** of automatic changer systems (vending machines) so as to **simultaneously** rewrite the control program... by the external host computer.)

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teaching of Yoshikawa in to teaching of Ichinose to have the control program sent concurrently to a several systems (vending machines) from the host computer. The modification would be obvious because of one of ordinary skill in the art would be motivated to operate rewriting a program and acquiring the data of the system concurrently and to / from several systems (vending machine).

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ichinose, Japanese Patent No. JP411265282A in view of Richmond, US Patent No. 5,581,485.

As per claim 3, Ichinose discloses that host computer sends control program to the vending machine. Ichinose does not disclose control program sent at **"predetermined schedule"** to vending machine.

However, Richmond discloses **control program are configured to suspend/continue execution at predetermined suspend point** (Abstract, lines 16-22 "The control programs are configured to suspend execution **at predetermined** suspend points and to continue execution at return points associated with said suspend points, and are executed sequentially in a concurrent manner by **a scheduler program** so that execution of the next control program in sequence continues when an executing program suspends.").

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teaching of Richmond in to teaching of Ichinose to have host computer send the control program to vending machine in accordance with a predetermined schedule. The modification would be obvious because of one of ordinary skill in the art would be motivated to send a program (control program) at prearranged timetable from host computer.

Claims 6 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ichinose, Japanese Patent No. JP411265282A in view of Totani, US Patent No. 5,603,056.

As per claims 6 and 12, Ichinose discloses that host computer sends control program to the vending machine and write - in equipment writes new control program

with a means to pass the right of execution. Ichinose does not disclose **host computer sends control program with a rewrite program.**

However, Totani, in detailed description of the preferred embodiments, discloses the **host computer sends the control program together with rewrite program** (col. 4, lines 30-33, "The I/O interface 4 connects the control microcomputer 1 to the host computer 7 to receive a new control program or a new rewrite program from the host computer") and **rewriter performs the rewrite of the control program by executing the rewrite program** (col. 5, lines 27-34, "After rewrite program stored in the rewrite program...executes the rewrite routine saved in the RAM 3 (step S3).")

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teaching of Totani into teaching of Ichinose to send control program together with rewrite program and rewrite control program by executing the rewrite program (Totani, col. 7, lines 8-14). The modification would be obvious because of one of ordinary skill in the art would be motivated to send the control program together with a rewrite program and execute the rewrite program to rewrite the control program received from host computer (Totani, col. 7 lines 7-14).

Claims 7 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ichinose, Japanese Patent No. JP411265282A in view of Honda et al., US Patent No. 5,651,732.

As per claims 7 and 13, Ichinose disclose all the limitations except control program together with **new data mapping information** sent from host computer.

However, Honda, in detailed description of the preferred embodiments, discloses the ***new data mapping information sent from host computer*** (col. 9 lines 26-34 "If previous data and previous parity data corresponding to the transfer requested data are not found in the previous data memory 13 and the previous parity data memory 14, respectively, the **host computer 1 generates** and sends a data read request through the array controller 2 to disk units 3 which contain the transfer requested data, and previous data and previous parity data corresponding to this transfer requested data, based on the **mapping information** detected or generated in the above-mentioned mapping").

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teaching of Honda into teaching of Ichinose to have the new commonly used information sent from host computer. The modification would be obvious because of one of ordinary skill in the art would be motivated to send a program along with new associated data information from host computer (col. 2, lines 8-15).

Claims 8 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ichinose, Japanese Patent No. JP411265282A in view of Fieldhouse, US Patent No. 5,307,346.

As per claims 8 and 14, Ichinose disclose all the limitations except ***data remapping program received from the host computer.***

However, Fieldhouse, in Network-Field interface for manufacturing systems, discloses the program module for the mapping is sent from the host computer (col. 3, lines 43-48 "The program module which **achieves the mapping** between the READ & WRITE services of the network's communication protocol and the data locations within the attached field device may be termed a Complex Device VMD, or CD VMD, and again it is this with which a **host computer** actually communicates").

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teaching of Fieldhouse into teaching of Ichinose to have the program (data re-mapping) module sent from host computer. The modification would be obvious because of one of ordinary skill in the art would be motivated to send a program (data remapping) along with new commonly used information from host computer (col. 2, lines 43-48).

**Conclusion**

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Title: Controller for automatic vending machine, JP 411265282A.

Title: Automatic changer system capable of rewriting a control program for controlling the system, US 5,657,301.

Title: Bufered intelligent digital tape controller with onboard ECC and featuring global control variables, US 5,581,458.

Title: Disk drive control computer and method for rewriting control program in flash EEPROM with serial communication using unassigned pins of SCSI or ATA connector, US 5,603,056.

Title: Disk array control system, US 5,651,132.

Title: Network-field interface for manufacturing systems, US 5,307,346.

Title: System for downloading software, US 5,444,861.

Title: Method and device for renewing an internal program of an apparatus having communication capability, US 5,787,288.

Title: Method and apparatus for remotely controlling and monitoring the use of computer software, US 5,388,211.

Title: Machine control device, US 5,844,796

Title: Method of updating of prices and display of messages in a local unit, PCT WO96/36023.

Art Unit: 2124

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Satish Rampuria whose telephone number is 703-305-8891.

The examiner can normally be reached on Monday-Friday from 8:30 A. M. to 5:00 P.M. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor Kakali Chaki can be reached at 703-305-9662. The fax number for this group is 703-872-9306.

An inquiry of general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is 703-305-3900.

Satish Rampuria

Patent Examiner

Art Unit 2124

10/27/03

*Chamli C-Dan*  
*Primary Patent Examiner*  
*A. Unit: 11/3/03*